VisualEyes™ gives clear view of weather conditions for wind farm sites

12 April 2012 - New enhancements to VisualEyes™ include extended forecasts, improved granularity of modelling, and greater differentiation between precipitation types.

An essential requirement for wind farm operators is the ability to anticipate the weather conditions at wind farm sites. Having highly accurate data about the real-time and forecast weather conditions at individual sites enables operators to plan visits or equipment deliveries, schedule maintenance or repairs while ensuring the safety of staff and contractors, and ensure any downtime is kept to a minimum.

The Met Office's VisualEyes™ system is a web-based monitoring and alert solution that gives customers a clearer picture of the real-time and forecast weather conditions at locations across Europe. Already used by many of the major utility companies and major wind farm operators, VisualEyes™ has just been enhanced to extend the planning service for lightning, hub height wind and visibility from 36 hours ahead to five days ahead.

VisualEyes™ uses the Met Office's world leading science to combine three distinct but integrated components in a single, easy-to-use platform. The site specific data is viewed using a map viewer based on Google maps which features customisable site pins and is colour coded to alert users to any relevant weather element threshold breach. An alert panel provides a detailed breakdown of which weather elements are triggering which alerts, enabling viewers to anticipate the movement of weather conditions hour by hour.

In addition to the five day planning charts customisable weather analysis reports can be generated up to 14-day ahead. These give detailed charts showing a selectable choice of weather elements. This include surface wind speed, temperature, rainfall and snow. This detailed information ensures wind farm operators can safeguard staff and contractors, reduce maintenance costs, and by knowing the weather conditions forecast, mitigate against the stranding of staff or equipment.

Amongst the enhancements now available from VisualEyes™, the map viewer function uses improved high resolution downscaling modelling to give customers a higher level of detail and accuracy to the weather layers. Users benefit from greater levels of granularity to the temperature and rain analysis, as well as improvements to the visibility, enabling customers to see areas affected by poor visibility due to rain and snow, as well as fog and mist. A further enhancement has been made to the snow layer, which can now distinguish between a variety of precipitation types, ranging from snow to drizzle and even hail.

Tom McIlwaine, Senior Account Manager, said: "We are continuing to develop and improve the capabilities and technology offered by VisualEyes™, in consultation with our customers. We want to ensure that it's driven by the market and that it meets the changing needs of wind farm operators."

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